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ABSTRACT

This handbook has been prepared for teacher educators involved in designing instructional modules in competency-based teacher education programs. Its contents present: (1) a rationale for competency-based teacher education and instructional modules; (2) an overview of the handbook; (3) explanation of the hierarchy of structure existing from single modules to total programs; (4) suggestions for a standard format for written instructional modules; (5) a reference system useful for cataloging, storing, and retrieving instructional modules; (6) guidelines for designing instructional modules; (7) a glossary of terms; (8) a selected bibliography of twenty-eight items; and (9) examples of modules illustrating format, style, and general approach suggested by the handbook. (MJB)

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HANDBOOK FOR THE DEVELOPMENT OF INSTRUCTIONAL MODULES IN COMPETENCY-BASED TEACHER EDUCATION PROGRAMS

SECOND EDITION

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PREFACE

Just as competency-based teacher education programs and instructional modules within those programs should be treated as open systems which encourage periodic revision, so it is with the *Handbook*. Over two thousand copies of the *Handbook* have been distributed since it was published two years ago. We have been gratified with its acceptance by other teacher educators and by our profession. During the two years since the first edition appeared, we feel we have learned a great deal more about developing instructional modules. In this edition we have made revisions which incorporate much of what we have learned.

We would like to take this opportunity to thank all of those who have contributed to that learning process but especially: Dr. Robert J. Elmes, Associate Director of the Teacher Corps/Peace Corps Program at the State University College at Buffalo; and Dr. Jimmy R. Stothart, Professor of Education at Northwestern Louisiana State University, who co-authored the paper which forms the basis for the evaluation system presented in Section IV.

We like to think that the *Handbook* has made a positive contribution to the competency-based teacher education movement which is growing in many institutions and in many states. It is our hope that this, the second edition of the *Handbook* would continue to serve to foster a movement which we believe holds great promise.

R. L. A.
J. A. M.
W. A. W.

January 1973

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SECTION I

RATIONALE FOR THE HANDBOOK

There is a growing trend in teacher education toward competency-based programs. An increasing number of states have adopted competency-based certification standards. Numerous teacher education institutions are engaged in developing competency-based programs. The authors are themselves deeply involved in the development of competency-based programs at their respective institutions. Although these efforts are neither unique nor as yet fully operational, the experiences of the authors to date suggest several apparently valid assumptions: (1) competency-based approaches to teacher education appear to offer great promise, (2) the keystone of the competency-based teacher education program is the instructional module, (3) the implementation of a competency-based teacher education program and the design and construction of instructional modules are most difficult tasks, and (4) these are tasks which will be more easily accomplished if teacher educators who are developing competency-based programs will share their ideas, resources, and products with one another.

The intent of the authors, therefore, is that this handbook should facilitate a sharing process by providing a common format for instructional modules which most will find useful. Thus, this handbook has been prepared for use by teacher educators involved in the process of developing instructional modules in competency-based teacher education programs with the hope that its suggestions will assist in that process.

SECTION II

RATIONALE FOR COMPETENCY-BASED TEACHER EDUCATION AND INSTRUCTIONAL MODULES

Teacher education is much criticized and often damned. Our purpose here is not to criticize or to defend but rather to take what we believe to be a valid position: competency-based teacher education appears to hold great promise and is a notion which deserves adequate testing.

By competency-based teacher education we mean a program in which the competencies to be demonstrated by the student and the criteria to be applied in assessing the competencies of the student are made explicit and the student is held accountable for meeting those criteria. The competencies specified are those particular understandings, skills, behaviors and attitudes believed to facilitate the intellectual, social, emotional, and physical growth of children. Simply put, the criteria used in assessing the competence of the student are threefold: (1) knowledge criteria are used to guage the student's cognitive understandings, (2) performance criteria are employed to assess the student's teaching behaviors, and (3) product criteria--measures of pupil growth--are used to assess the student's teaching effectiveness.

In comparing competency-based programs with traditional programs, competency-based approaches seem to offer many advantages; three are chief among those:

1. Because in a competency-based program the competencies to be acquired by the student and the criteria to be applied in assessing the competencies of the student are made explicit and public, the student is fully aware of what is expected of him and how those expectations are related to his role as a teacher; thus, clarity of purpose replaces the vagueness and ambiguity too often characteristic of traditional programs.

2. In a competency-based program achievement is held constant and time varies whereas in traditional programs time is held constant and achievement varies; thus, competency-based approaches ensure mastery of the specified competence while allowing for student self-pacing.

3. While traditional programs place heavy emphasis on program entrance requirements, competency-based programs place heaviest emphasis on exit requirements; therefore, competency-based programs open the doors of teacher education to individuals who might otherwise be excluded while ensuring mastery of the specified competencies.

We feel that these three characteristics and assumed advantages alone are reason enough to move toward competency-based programs. Further advantages are described in the *Handbook* as greater detail is provided.

A second term--instructional module--needs to be defined before we move on. A major characteristic of competency-based teacher education programs is the emphasis given to instructional modules as a delivery system. In most simple terms, the instructional module is a set of learning activities intended to facilitate the student's achievement and demonstration of an objective or set of objectives. As the reader explores this handbook he will no doubt find that the process of making this definition operational--the development of just one competency-based instructional module--is far more complicated and difficult than implied by the definition. We would hope that the pages which follow will make such efforts less complex and less difficult.

SECTION III

OVERVIEW OF THE HANDBOOK

Because so many of the terms and concepts relevant to a competency-based approach are new or newly defined, this handbook has been designed on the assumption that the reader is totally unfamiliar with these terms and concepts and their special meanings. Therefore, it may be that the particularly well-informed reader may find much of the *Handbook* to be a review rather than the presentation of new ideas. A good example of this will be found in the wide range of very different types of objectives which are discussed.

As suggested by its title, the *Handbook* focuses its attention on the development of instructional modules in competency-based teacher education programs. While tempted to deal with other issues relating to competency-based teacher education, the authors have tried to resist that temptation. Thus, the focus of the *Handbook* remains rather narrow, dealing with topics central to instructional module development:

1. The Instructional Module: The instructional module and its characteristics are described, a system for evaluating modules is suggested, and a brief description of common problem areas found is reported.

2. Modules and Program Structure: The next section deals with a modular approach to teacher education, explains the hierarchy which builds from a single module into a total program for a prospective teacher, and gives examples in each of the categories in that hierarchy.

3. Module Description Format: A format which might be used for written descriptions of instructional modules is suggested, since a standard format would facilitate the sharing of modules.

4. A Reference System: A reference system which might be used to catalog instructional modules so as to facilitate their sharing between teacher education institutions is presented.

5. Designing Instructional Modules: This section asks the reader to reflect upon the information in the previous sections as he begins to move into the area of designing competency-based instructional modules.

6. Glossary of Terms: Definitions of a number of terms which are important to the understanding of the *Handbook* and important to a subsequent sharing of ideas regarding competency-based teacher education and instructional modules are presented.

7. Selected References: Bibliographical references of resource materials which might be of help to readers who undertake the development of competency-based instructional systems are provided.

8. Sample Modules: Several sample modules are included as examples of the format, style, and general approach suggested by this handbook.

SECTION IV

THE INSTRUCTIONAL MODULE

What is an Instructional Module?

Earlier an instructional module was defined as a set of learning activities intended to facilitate the learner's acquisition and demonstration of a particular competency or set of competencies. Although the focus here is very directly on teacher education instructional modules, it should be noted that it is the belief of the authors that the characteristics and procedures described here are useful in designing and developing instructional modules--and instructional units--of many kinds. That is, we do not believe that the procedures advocated here are useful only in developing competency-based teacher education instructional modules but have utility in designing any instructional unit or system which is intended to help students "learn for mastery" in the sense used by Bloom (1968).

Further, it should be noted that the effectiveness of an instructional module is determined by the degree to which it helps the learner acquire and demonstrate the competency or competencies specified. That is, the best measure of a module's worth is information regarding the accomplishment of its purpose. The crucial question is: was the module effective--and efficient--in helping the learner learn? With that in mind, however, it is the position here that the presence of certain characteristics in a module make it more likely to be effective. The instructional module is viewed here as consisting of seven elements: rationale, objectives, prerequisites, pre-assessment, learning alternatives, post-assessment, and remediation as depicted in Figure 1 on the next page.

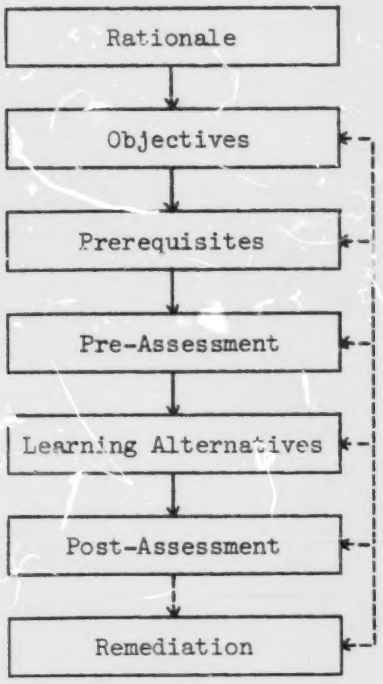


Figure 1. Instructional module.

Rationale. The rationale--by some called a prospectus--serves two purposes: (1) to describe the purpose and importance of the objectives of the module in empirical, theoretical, and/or practical terms; and (2) to place the module and the objectives of the module within the context of the total program. Thus, the rationale explains and attempts to justify the particular competency or competencies for which the module is designed. It permits the student to more fully understand the program's expectations and to more clearly see the relevance of the particular objectives specified in terms of the roles, responsibilities, and functions of the practicing professional teacher. Further, the rationale helps the student understand how the competency he is to demonstrate in one particular module is related to other competencies

which he is expected to demonstrate prior to completing his program. By placing the module and the objectives of the module within both a professional role context and a program context, the designer avoids atomization of the program--a potential danger when using an instructional module approach.

Objectives. Objectives are statements of two major types: (1) instructional objectives specify the competencies a student is to demonstrate, and (2) expressive objectives specify events the student is to experience. Objectives serve two central functions: (1) they communicate the goals, expectations, and avenues of approach to students, instructors, and counselors; and (2) they help the instructor design and evaluate his purposes, strategies, and effectiveness. Thus, objectives form the foundation on which instructional modules are built. That is, they not only provide statements of program focus in specifying teaching competencies to be acquired by students but also suggest learning alternatives which might facilitate the achievement of those competencies.

Modules vary as to the number of objectives specified. Some modules have a single objective, others have several objectives, and still others have many objectives. Regardless of the format used, instructional objectives should describe in explicit form the learning outcomes which are expected: (1) cognitive behavior in the case of knowledge objectives, (2) affective behavior in the case of affective objectives, (3) teaching behavior in the case of performance objectives, and (4) pupil behaviors in the case of consequence objectives. Further, an objective should be written in a way which permits one to assess with confidence whether or not that objective has been demonstrated; that is, objectives should be binary. In addition, there are those who argue that an objective should be unitary; that is, it should call for a single, independent performance rather than a series of related, dependent performances. They argue that doing so encourages more appropriate assessment of the objective. On the other hand, there are those who contend that objectives need not be unitary so long as assessment procedures are. The crucial issue here has to do with measurement. Whether unitary objectives do or do not promote more adequate assessment is debatable--and is debated. However, the need for assessment to be unitary is clear.

As suggested earlier, an instructional objective specifies the competency to be demonstrated by the student, while an expressive objective specifies an event he will experience. An example of an instructional objective in the field of teacher education and the use of audio-visual equipment might be: "Given a functioning half-inch videotape recorder, the student will be able to tape a five-minute classroom teaching demonstration and to play the tape back for observation; the acceptance level will be a picture and sound which is clearly discernible."

Instructional modules which focus on expressive objectives are at some variance with the model presented above in that the student has met the objective when he has experienced the event specified. Therefore, the notions of pre-assessment and post-assessment do not hold except as formal or informal procedures might be used to determine whether or not the student has had the experience specified. Examples of expressive objectives follow:

1. The student will read a story to a kindergarten child while holding that child on his lap.
2. The student will visit the home of each of his pupils.

Instructional objectives generally reflect three elements of considerations:

1. Type. Considerations regarding type reflect a concern for the nature of the competency the student is expected to demonstrate. For example: (a) the ability to tape a five-minute videotape segment and play it back, (b) the ability to ask higher-order questions, and (c) the ability to be empathic toward low-income, minority children.

2. Condition. In many but not all cases, the objective will state the conditions under which the competency is to be demonstrated. For example: (a) in a classroom setting during a microteaching episode, (b) in a teacher-pupil interaction simulation, and (c) in a store-front tutoring situation.

3. Criteria. To the extent possible, the objective should suggest the criteria to be applied in assessing the student's mastery relevant

to the objective; the acceptable standards should be indicated. For example: (a) both picture and sound must be clearly discernible, (b) the questions asked should evoke higher levels of cognitive function in the pupil, and (c) the student's reactions to the pupil should reflect an understanding and acceptance of the child's needs and life style.

In specifying the criteria to be applied, it is helpful to think of three major categories mentioned earlier: (1) knowledge criteria are used to assess the cognitive understanding of the student, (2) performance criteria are used to assess the teaching behaviors of the student, and (3) product criteria--measures of pupil growth--are used to assess the teaching effectiveness of the student.

While this section of the *Handbook* has presented examples of several types of objectives, there are additional distinctions which the reader may find useful. Therefore, examples of various types of objectives are presented here.

Cognitive Objective. The student will be able to write, in a class setting without the use of aids, a definition of the term operant conditioning which is adjudged accurate. (Knowledge criteria are applied in assessing competence.)

Affective Objective. The student will demonstrate his concern for persons in the lower socio-economic groups by voluntarily spending at least two hours per week working in a social service agency. (Because of the nature of the affective domain, measurement criteria in this area are not usually discussed in advance with the student; should they be, the objective might be thought of as an expressive objective; performance criteria are used.)

Psychomotor Objective. The student will demonstrate his competency by writing ten words on the chalkboard in such a manner that three impartial judges agree that a minimal level of performance has been accomplished. (Performance criteria are used to determine mastery.)

Demonstrative Objective. The student will demonstrate one competency in the indirect teaching approach by the following: given a subject and one day to prepare a fifteen-minute lesson, the student will present

said lesson in such a manner as to manifest indirect teaching behaviors as defined in the Flanders interaction analysis system. (The objective is the demonstration of teaching behaviors; performance criteria are applied in assessing mastery.)

Consequence Objective. The student will demonstrate one competency in teaching mathematics by the following: given three eight-year-old pupils who have not mastered division by one digit, the student will successfully teach said pupils division by one digit in a period of not less than three weeks; success is described as ninety percent accuracy upon the part of two of the three pupils. (The objective is the demonstration of changes in pupil behavior; product criteria are applied in assessing competence.)

Expressive Objective. The student will visit the home of each of his pupils at least once during the school year.

Prerequisites. Prerequisites fall into two major categories: (1) general background competencies needed to start a module or cluster of modules, and (2) specific competencies which were to have been acquired in a preceding module. In general, a good rule of thumb is for program designers to hold required prerequisites to an absolute minimum thus facilitating the greatest possible program flexibility. In addition, pre-assessment procedures should be designed to disclose necessary prerequisites.

In order to provide adequate guidance for the student, the prerequisites should include: (1) a statement indicating whether or not prerequisites exist, (2) a list of clearly stated competencies which are prerequisite to success in the module, and (3) a reference to the sources for developing the prerequisite competencies.

Pre-Assessment. Pre-Assessment involves measurement which is used to determine the following:

1. Can the student demonstrate mastery of the competencies prerequisite to the learning alternatives which follow, or must he develop prerequisite competencies so that he might be at the necessary entry level?

2. Can the student already demonstrate mastery of the specified competency, or does he need to engage in learning alternatives relevant to the objective or objectives?

3. Can the student already demonstrate certain aspects of the specified competency and, therefore, needs to engage in learning alternatives relevant only to those aspects in which he has not demonstrated mastery?

Thus, the pre-assessment procedures provide the student with an opportunity to demonstrate mastery relevant to the objectives of the module prior to instruction. That is, the pre-assessment gives the student an opportunity to "test out" of some or all of the objectives. In addition, because they are usually diagnostic in nature, the pre-assessment may indicate that the student is not "ready" for the module since he lacks certain prerequisite competencies. Therefore, the pre-assessment should: (1) be partially or totally optional for the student, (2) assess--in a unitary manner--all of the competencies specified in the objectives, (3) assess only those competencies specified in the objectives or specified as prerequisites to the module or to entry into the program, (4) provide for diagnosis which gives the student prescriptive feedback intended to guide the student in his fulfillment of the objectives, and (5) be realistic and reasonable with regard to student and instructor time.

The term pre-assessment usually evokes visions of pencil-and-paper tests of a standardized variety. However, program designers should also consider the usefulness of other measures--formal and informal, direct and indirect, objective and perhaps a bit less objective. Faculty-student discussions and the observations of third parties should be viewed as attractive possibilities in certain instances. The position taken here is one which is not universally accepted: given our present level of psychometric sophistication, it is better to poorly measure those competencies to which we attribute great importance than it is to precisely measure those competencies to which we attribute far less importance. This stand does not imply that we should not try to measure with precision. It is simply to suggest that there is still much to learn about measuring human behavior.

Learning Alternatives. Learning alternatives--sometimes referred to as instructional activities--are the tasks made available to the student with the intent that they would facilitate the student's mastery of the objective or objectives. It is not the purpose here to describe the vast number of possible activities and materials which might serve the function described above. However, a few very general comments seem appropriate, although these should be seen as reflections of the biases of the authors:

1. Insofar as possible, learning alternatives should provide for student self-pacing.

2. Whenever possible, learning alternatives should be personalized; that is, they should reflect the particular needs, capabilities, attitudes, aptitudes, and learning style of the student.

3. While activities can be very specific and narrow in scope, it is perhaps best--though not easiest--to provide students with the opportunity to select from many possible alternatives.

4. Activities should include equivalent practice; that is, an activity equated with the specified outcome. For example, if the student is to demonstrate the ability to use a half-inch videotape recorder, he must have the opportunity to practice using a half-inch videotape recorder.

In addition, it is important to keep in mind that in a competency-based program, the student is held accountable for the demonstration--not the acquisition--of the competencies specified. Thus, the learning alternatives are the various instructional options available to the student; each is designed to contribute to his acquisition of the objectives. They are not required. And, in addition to those experiences which are instructor-designed, the student should be free to design his own. The student's responsibility is to meet the objectives; he is not responsible for engaging in a particular set of learning activities. Consequently, the learning alternatives should provide: (1) where feasible within the context of the situation and the objectives, a variety of alternative learning activities

including the option to pursue his own alternative, (2) experiences which are adjudged to result in the acquisition of the objectives specified, (3) a flowchart or narrative description of the sequence of events which might be followed if it is thought that the objectives and/or the learning alternatives are developmental or hierarchial in nature, and (4) opportunities for equivalent practice relevant to each of the objectives.

Post-Assessment. Post-assessment procedures may vary as greatly in format as do pre-assessment procedures. Indeed, they may be identical to the pre-assessment. They are essentially measuring processes which are used to determine the following:

1. Can the student now demonstrate to criterion the competencies relevant to the specified objective, or is it necessary for him to engage in remediation activities--a recycling through learning alternatives similar to those he has already experienced or a set of learning alternatives which represent a different approach?

2. If the student is not able to demonstrate competence, to what can this be attributed: (a) lack of student ability, motivation and/or effort, (b) inappropriate or ineffective instruction, or (c) unrealistic expectations as reflected in the objective or objectives?

Thus, the post-assessment procedures are intended to permit the student to demonstrate achievement of the objectives specified. And, in addition, the post-assessment assumes a second role--that of identifying learning and instructional weaknesses and providing a basis for guidance as well as identifying competence. That is, data from the post-assessment should be useful in monitoring both student progress and module effectiveness. Therefore, the post-assessment should: (1) assess--in a unitary manner--all of the competencies specified in the objectives, (2) assess only those competencies specified in the objectives or specified as prerequisites to the module or to entry into the program, (3) where possible, be formative as well as summative, and (4) be realistic and reasonable with regard to student and instructor time.

Remediation. It is usually helpful to include a description of remedial activities in the module, although some prefer not to do this. Remedial activities are learning alternatives which are intended to assist the student who has failed to demonstrate mastery of a particular competence as indicated through post-assessment results. As indicated previously, remedial activities may be "more of the same" or may represent a different task. In all cases, it is the intent of remediation to be helpful and not punitive and indeed to give the student every opportunity to be successful. Generally, remedial activities are designed by the instructor and the student in a conference setting. Together they examine the student's performance relevant to the post-assessment and decide what instruction might be most helpful.

Systematic Evaluation of an Instructional Module

The suggestions put forth in the first part of this section provide the basis for the checklist presented on the next page. The checklist is intended to serve as a guide to those who would evaluate instructional modules using the suggestions made. Obviously, those who would use the checklist should feel free to modify the checklist to make it more nearly reflect their own biases. The checklist provides: (1) a concise, easily used system whereby all of the elements of an instructional module can be examined relevant to predetermined criteria; (2) a system wherein each criterion must be applied to each element and decisions regarding congruence are made, (3) a format which allows two or more modules intended to develop similar competencies to be compared in accordance with identical, predetermined criteria.

Thus, the checklist serves as a guide for the development, selection, and modification of instructional modules. It should be remembered that effective utilization of the checklist requires the user to be intimately familiar with the complexity of ideas presented here and represented by the several word terms listed as criteria on the checklist. Further, it should be noted that in addition to the criteria described earlier, the checklist contains one additional category, "general." The "general"

Element Criteria	Yes	No
Rationale		
1. Purpose and importance described.		
2. Place within program explained.		
Objectives		
1. Learning outcomes specified.		
2. Learning outcomes verifiable.		
3. Learning outcomes unitary.		
Prerequisites		
1. Prerequisites noted.		
2. Prerequisites stated as competencies.		
3. Reference to prerequisite resources.		
Pre-Assessment		
1. Procedures are optional.		
2. All specified competencies assessed.		
3. Only specified competencies assessed.		
4. Procedures are diagnostic.		
5. Time requirements are reasonable.		
Learning Alternatives		
1. Variety of alternatives are provided.		
2. Experiences related to learner outcomes.		
3. Flowchart or narrative provided.		
4. Opportunities for equivalent practice.		
Post-Assessment		
1. All specified competencies assessed.		
2. Only specified competencies assessed.		
3. Procedures are formative and summative.		
4. Time requirements are reasonable		
General		
1. Communicates effectively.		
2. Promotes positive affect.		

Figure 2. Checklist for evaluating instructional modules.

criteria are two in number: (1) communicates effectively, and (2) provides for positive effect. Both of these call for subjective judgments relevant to two related issues. In making a judgment regarding the effectiveness with which the module communicates, a user of the checklist considers the following: (1) is the module free from jargon, (2) are program expectations explicit, (3) are directions clear, and (4) is it likely that most students will understand the module and its implications relevant to their role as learners? In making judgments regarding the affective impact the module might make on the learner, the following issues might be addressed: (1) is the student likely to see himself as having options, (2) is he likely to view expectations as being reasonable, and (3) is he likely to see the importance and relevance of the competencies specified?

Further, it should be noted that application of the checklist provides a basis for deciding whether or not the criteria are met. Utilization of the checklist should not be seen as providing an adequate analysis of the content included or of the appropriateness of the module in terms of its aims or objectives, except as these fit within the total program as conceptualized. A careful application of the criteria in the rationale, however, may uncover any discrepancy between program goals and program philosophy, a not too uncommon occurrence. Likewise, a module which fails to meet a large portion of the criteria may violate aspects of the instructional philosophy implicit in competency-based instruction.

Common Problems

The final part of this section very briefly describes some of the more common problems the authors have found as they have examined numerous competency-based teacher education instructional modules from a variety of programs--programs found in colleges and universities which vary greatly as to size and geographical location. As is to be expected, all are relatively new programs and, therefore, the modules reviewed should be seen as first attempts which are very much open to revision. Indeed, modules should always be viewed as open systems which are under constant revision.

The comments which are made here are presented relative to six of the seven elements which characterize instructional modules. (Remediation procedures, an element found in many modules, is not included in this discussion inasmuch as few modules contain descriptions of predetermined remedial instructional activities. Since remediation procedures are generally designed specifically for an individual student, they do not generally permit predetermined specification.)

Rationale. Rarely are the purpose and importance of the objectives of the module described in either empirical, theoretical, and/or practical terms. Generally, it is a "here it is, do it" approach which appeals to authority far more than to logic. And, in most cases, the module and/or the objectives are not placed within the context of the total program. Consequently, it is common to find that the student was not provided with a frame of reference from which he could view the total program and identify with those competencies he was expected to demonstrate.

Prerequisites. Approximately one-half of the modules examined fail to make reference to prerequisite competencies required. In those cases where prerequisites are noted, reference is made to prerequisite modules rather than prerequisite competencies. Consequently, the student is able to identify both the competencies required and resources for their acquisition if he refers to the module noted.

Objectives. With few exceptions, all of the modules analyzed state the objectives to be demonstrated by the student. Excellent statements of objectives are provided; however, most are lacking in one or more respects. Common problems are wordiness, ambiguity, and the absence of consequence objectives and, conversely, a seeming overemphasis on knowledge objectives. Certain objectives are stated in a manner which does not permit persons who already possess the knowledge or skill to test out of the module on the basis of the pre-assessment. Other objectives do not specify the criteria which will be used in assessing achievement of the objective.

While there is no universally accepted set of criteria to be applied to statements of objectives, those which are unitary, binary, and verifiable do tend to avoid the problems cited above. Some feel that if several objectives are included in the modules, unitary statements sometimes result in rather lengthy lists, which may have the effect of producing negative student attitudinal reactions. While this may be true, the unitary objective is more readily linked to assessment and learning alternatives and tends to reduce development problems while increasing continuity between the modular elements.

Assessment. Four basic problems are evidenced in the modules relative to pre-assessment and post-assessment procedures: (1) failure to assess all of the objectives, (2) assessment of objectives which had not been specified as a part of the module, (3) lack of congruence between the measurement techniques used and the objective specified--the utilization of invalid measures, and (4) the objective was assessed at a level different to that in the criterion specified.

Learning Alternatives. By and large, the instructional modules reviewed contain learning alternatives which meet the criteria; the most common problems are: (1) lack of alternative activities, (2) busy work unrelated to the objectives, (3) lack of opportunities for equivalent practice, (4) failure to provide activities addressing all of the objectives, and (5) treatment of the activities as ends rather than means.

General Considerations. Judgments regarding the effectiveness with which the modules communicated and the learner effect which might result is highly subjective. However, several observations seem valid: (1) many of the modules are vague in informing the student of the program's expectations, (2) most contain educational jargon students might find difficult to understand, (3) some of the modules appear to be mechanistic and manipulative, allowing little room for student initiative, creativity, and flexibility, and (4) some of the modules do not appear to have been generated from a conceptualized whole; rather they had the appearance of being atomized.

Summary. In looking at the modules reviewed, there seem to be four glaring problem areas which call for attention: (1) competencies need to be generated from a well-conceptualized program based on empirical, theoretical, and/or practical considerations far better than presently seems the case; (2) greater specificity must be incorporated into the objectives stated and, perhaps, more thought given to the competencies desired of program graduates; (3) while it is true that the state of the art relevant to measurement is far short of the level we would prefer, the assessment procedures described too often do not reflect the best of what is presently known, and (4) modular instruction should be perceived as a way of personalizing instruction--not as a better way to "batch process" students.

SECTION V

MODULES AND PROGRAM STRUCTURE

In the development of a teacher education program consisting of competency-based modules, it is helpful to reduce the various areas of competence and their associated instructional activities to the lowest denominator. This in turn calls for a restructuring of these lowest denominators into a complete package which might be labeled "teacher education program." As suggested earlier, the smallest element in the structure proposed here is referred to as a "module." Generally, isolated modules are of little value; it is only when they are combined with other modules and with several groups of modules that they become meaningful.

One advantage of using a modular approach in teacher education is that once a sufficient number of modules have been developed, the instructor in cooperation with the student can select those groups of modules and individual modules within each group which fit the individual needs of the student in relationship to his expected role as a professional educator. Further, the "buyer of the product," in this case the local school district, has a greater assurance that the "product" which it is buying is going to have competencies which complement the district's educational program.

This section examines two quite similar program structure hierarchies: (1) a module based on a single objective or, at most, two related objectives, a module cluster, a component, and finally a program; and (2) a module based on a cluster of objectives, a component, and finally a program. The differences between these two types of program structure are perhaps more academic than significant although common terminology will contribute to better sharing of ideas and products.

Module

An instructional module has been previously defined as a set of learning activities intended to facilitate the student's achievement and demonstration of an objective or set of objectives. That definition was expanded in an examination of elements of the instructional module: an objective or objectives, prerequisites, pre-assessment procedures, learning alternatives, post-assessment procedures, and remediation procedures. Where program designers might opt for the "one objective to a module" notion, it would generally be the case that a single module would not stand alone but would rather be a part of a group of conceptually related modules--a module cluster.

Module Cluster

Some programs will no doubt build instructional modules around a group of related objectives while others will build a series of modules, each with but one specified objective or two closely related objectives. Whichever format is used, the point is clear: a single objective will rarely stand alone and be meaningful except as it is related to other objectives. Human behavior is far too complex a process to expect isolated outcomes to be meaningful. Building on an earlier example, the following is an example of a module cluster which would be built around a series of related modules. The ability to use a half-inch videotape recorder would be the focus of a single module which when combined with other modules on the use of other types of videotape recorders and with modules on the repair and cleaning of videotape recorders would be grouped together into a module cluster which might be referred to as a videotape recorder use and care cluster.

The reader will note that the same objectives which would be specified in the above example might--in a different program structure--be combined into a group, and the learning alternatives relevant to that group of activities could be perceived as a single module.

Component

A component is--depending upon the program structure favored--a related group of modules or a related group of module clusters which

complement each other and form the basis for what might be called courses in traditional programs. Still using the previous example, a component might include all of the modules--or module clusters--dealing with the use and care of many types of audio-visual equipment and materials. Indeed, the component might be given a course-like or discipline-like label such as "instructional communications."

Program

The teacher education program, therefore, consists of all of the components. To carry our example one step further, "instructional communications" in conjunction with other components including components such as "educational psychology," "child development," and "social-cultural foundations," would constitute the program.

Program Model

The two figures which follow are intended to depict the two types of program structure we have discussed.

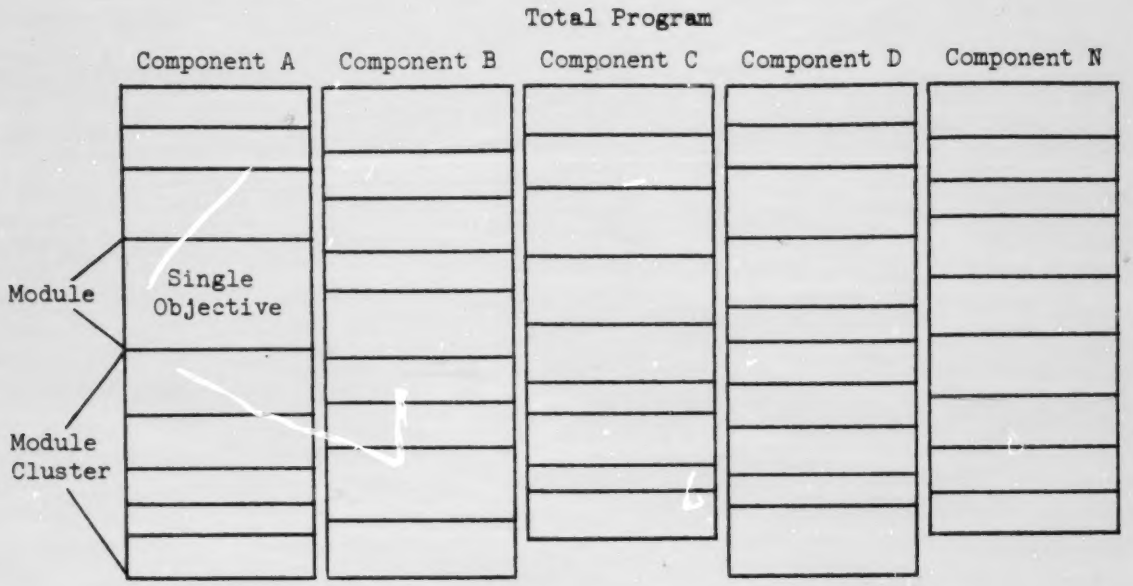


Figure 3. One objective-one module program structure.

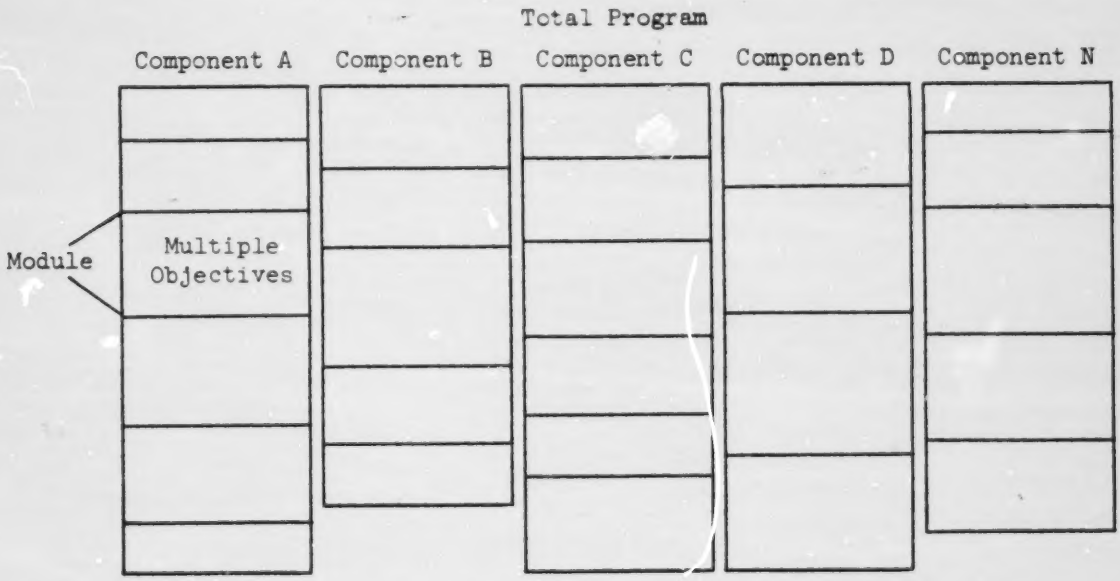


Figure 4. Multiple objectives-one module program structure.

SECTION VI

MODULE DESCRIPTION FORMAT

If there is to be a productive sharing of modules among teacher educators, it would seem wise if all could accept a common format for their written description. The following is a format which has shown itself to be reasonably uncomplicated and which has provided for a measure of uniformity and standardization while permitting flexibility.

Title Page of the Description

The first page of the written description contains a title page which includes: (1) the reference system designation (see Section VII); (2) the name--and perhaps a brief description of--the teacher education program for which the module or module cluster was developed; (3) the name of the component of which the module or module cluster is a part; (4) the name of the module or module cluster; (5) the name of the person or persons responsible for its development; (6) the date and state of development; (7) developer comments; (8) user comments; and (9) if the title page to a module cluster, a listing of the modules within the cluster. (Examples are provided in Section XI.)

Body of the Description

The body of the description is somewhat dependent upon the program structure chosen. If a module cluster approach has been selected, the first page should include: (1) a rationale for the module cluster pointing out its intent, purpose, and importance; (2) a description of the general objectives of the cluster; and (3) general prerequisites for the cluster. The modules within the cluster would each contain their own rationale, objective, prerequisites, pre-assessment, learning alternatives, post-assessment, and remediation. (Examples of this are also provided in Section XI.)

In those programs where a group of objectives form the basis for a single module--the "many objectives, single module" case--the first page would look very much like the description which would be provided for each module in a module cluster. That is, descriptions would be presented relevant to: (1) the rationale; (2) the objectives; (3) prerequisites--if any, (4) pre-assessment procedures, (5) learning alternatives, (6) post-assessment procedures, and (7) remediation procedures--if indeed any are spelled out. (Section XI also provides examples of this.)

Subsequent pages would be used in those instances when the description of a module goes beyond a single page. In order to avoid confusion, each module in a cluster should begin on a separate page. In some cases, addendum or appendix materials could be attached to the module description; this might include such things as bibliographical references, instructional materials, and/or assessment materials. Many programs would find it helpful to gather information regarding the student's perception of the module or module cluster. Such instrumentation as might be used in the collection of such data could also be appended to the module description.

SECTION VII

A REFERENCE SYSTEM

In order to properly catalog modules for a retrieval system which makes their recall a relatively simple process, to provide assistance in making the sharing of modules a more orderly process, and to avoid duplication and gaps in the total program of students in a particular instance, a reference system of some kind seems necessary. The following system is used by the Instructional Module Development and Dissemination Project at the University of Houston and is suggested as one which we believe is both simple and useful.

Institution Designation

Each module designation should include reference to the institution responsible for its development. As modules are developed and feed into this system, each participating institution will be assigned a three-letter code. For example, the designation for the State University College at Buffalo is SCB and for the University of Houston it is HOU. This designation should be placed in parentheses and should follow all other reference system designations for a particular module.

Component Designation

Components will be referenced by a three-letter code. The component designation should be the first three indicators in a module designation and is followed by a hyphen. For example, the following component designations have been established:

ARE: Art Education.
CHD: Child Development.
CLM: Classroom Management.
CMM: Curriculum, Methods and Materials.
ICM: Instructional Communications.
PST: Professional Sensitivity Training.

RES: Educational Research.

SCF: Social-Cultural Foundations of Education.

TTP: Teaching Theories and Practices.

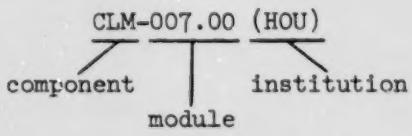
These and additional component designations are being used. Component designations are becoming quite numerous as developmental efforts increase.

Module Cluster/Multi-Objective Module Designation

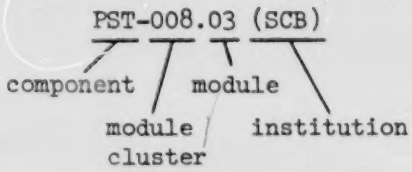
In those programs in which module clusters are a part of the program structure, these clusters will receive a three-digit designation followed by a decimal point and a two-digit designation for each module in the cluster. In those programs in which a number of objectives are contained in a single module, that module will receive a three-digit designation followed by a decimal and two zeros.

Reference System Examples

To identify a classroom management instructional module developed at the University of Houston which focuses on a group of related objectives, the designation might be as follows:



To identify a human relations training module within a module cluster developed at the State University College at Buffalo, the following designation might be used:



SECTION VIII

GUIDELINES FOR DESIGNING INSTRUCTIONAL MODULES

The following are a series of suggestions which have been found to make the task of writing instructional modules an easier one while maximizing the potential effectiveness of the module produced:

1. Throughout the designing of an instructional module, the author ought to continually focus on the goals of the program; that is, he ought to always very carefully consider how the objectives of the module contribute to the competencies of program graduates and he ought to try to keep learning alternatives congruent with the instructional philosophy of the program. These concerns should be reflected in the rationale provided.

2. In specifying the competency to be acquired and demonstrated by the student, the following questions ought to be addressed: (a) if it is knowledge which is specified, exactly what knowledge is it that the student is to have mastered, (b) if it is an attitude which is specified, exactly what affective behavior is it that the student is to have displayed, (c) if it is a teaching behavior which is specified, exactly what teaching behavior is it that the student is to have demonstrated, and (d) if it is teaching effectiveness which is specified, exactly what pupil change is it that the student is expected to bring about and under what circumstances is that to be accomplished?

3. Having specified the objectives, the module designer must determine the prerequisite competencies required of the student. Prerequisites should be specified only when there is ample evidence suggesting that indeed those are prerequisite to entry. Insofar as reasonable, prerequisites should be held to a minimum so as to maximize program flexibility and student options.

4. In designing the pre-assessment, the designer should make sure that the criteria being applied accurately assess the competency of the student relevant to the objective. For example, if product criteria are applicable, a measure of cognitive understanding is inappropriate. It is also important that assessment be reality-oriented and that it provide the student with feedback; that is, many assessment procedures are most effective if they are field-centered and diagnostic.

5. In designing learning alternatives, the designer should attempt to offer a wide range of alternatives to the student. That is, the student should have a number of instructional options open to him so that he might select those which he feels offer him the greatest opportunity for success, are most in tune with his preferred learning style, and will allow him to achieve mastery in the shortest possible time. Furthermore, the student must always have the option to design--with faculty assistance if requested--his own instruction relevant to objectives. It is well to remember that the student is not accountable for the learning alternatives but for demonstration of the specified competencies.

6. If the designer in designing learning alternatives finds any or all of the routes offered to be developmental or sequential (where a particular competence builds on prior competencies), that sequence should be clearly defined so that the student might understand its nature and plan accordingly.

7. No matter how many learning alternatives are offered, the student should always have an opportunity for equivalent practice.

8. Post-assessment procedures--to be most effective--should be designed using the guidelines suggested above for the design of pre-assessment procedures. Validity is the central concern.

9. While it will probably be relatively rare initially, there may be instances in which the designer might specify appropriate remedial activities, although that process is generally situation specific. As programs develop and operate, the activities which prove to provide adequate remediation might become alternatives regularly offered all students.

10. Description of the module should be as clear and concise as possible. This does not negate the necessity to elaborate where elaboration contributes to the student's fuller understanding.

11. The designer will generally find it useful to have his module reviewed by several of his colleagues and several students as their feedback might be useful in providing information concerning such modifications as would seem appropriate. Indeed, it is helpful to have all students evaluate each of the modules in this program.

12. On completion of the module design, the designer should once again question whether the module focuses on a competence or set of competencies which is relevant to the development of the student, is a good model of instruction, and holds the promise of being effective.

13. Finally, in spite of the tendency for the module designer to become ego-bound to the module he has developed, he must always view it as a dynamic structure which is open to change and modification. Without such an attitude, the chances of developing a program capable of regeneration, a program of continuous relevance, are nil.

SECTION IX

GLOSSARY OF TERMS

Although all of the terms which follow have been defined elsewhere in this handbook, definitions are provided here for the added convenience of the reader:

Competency-based teacher education program. A competency-based teacher education program is a teacher education program in which the competencies to be acquired and demonstrated by the student and the criteria to be applied in assessing the competencies of the student are made explicit and the student is held accountable for meeting those criteria.

Component. A teacher education program component is--depending upon the program structure favored--a group of related modules or a group of related module clusters which complement each other and form the basis for what might be called courses in traditional programs.

Expressive objective. An expressive objective is a statement which specifies an event a student is to experience.

Instructional module. An instructional module is a set of learning activities (rationale, objective, prerequisite, pre-assessment, learning alternatives, post-assessment, and remediation) intended to facilitate the student's acquisition and demonstration of a particular competency or set of competencies.

Instructional objective. An instructional objective is a statement which specifies a competency a student is to acquire and demonstrate.

Learning Alternatives. Learning alternatives are instructional experiences which are made available to a student with the intent that they would facilitate that student's mastery of an objective or set of objectives.

Module Cluster. A teacher education program module cluster is a group of related modules in programs which favor a one objective-one module program structure.

Post-assessment. Post-assessment procedures are measuring processes which are used to determine the student's level of mastery relevant to a specified objective or set of objectives following instruction intended to facilitate his achievement of mastery.

Pre-assessment. Pre-assessment procedures are measuring processes which are used to determine the student's level of mastery relevant to a specified objective or set of objectives prior to instruction relevant to those objectives.

Prerequisite. Prerequisites are those competencies a student is expected to demonstrate prior to his beginning to work on a particular instructional module.

Remediation. Remediation procedures are learning alternatives which are intended to assist the student who has failed to demonstrate mastery of a particular competence--as indicated through post-assessment results.

SECTION X

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SECTION XI

SAMPLE MODULES

This, the last section of the *Handbook* contains several examples of instructional modules. Descriptions of two module clusters developed at the State University College at Buffalo and two modules developed at the University of Houston are presented. Each example conforms to the format and structure which have been suggested in this handbook. And each module represents an effort which is always open to revision on the basis of feedback from students. As noted previously, the bias of the authors is that a module is never a finished product but is rather a dynamic, open system capable of regeneration.

Reference System Designation: TTP-301.00 (SCB).

Program: Seventh Cycle Teacher Corps at the State University College at Buffalo, Buffalo, New York.

Component: Teaching Theories and Practices.

Module Cluster: Goal Analysis and Behavioral Objectives.

Developer: Dr. Robert L. Arends, Teacher Corps Program, Room 117 Bacon Hall, State University College at Buffalo, 1300 Elmwood Avenue, Buffalo, New York 14222.

Date and State of Development: Summer 1972; this module cluster is a revision of TTP-017.00 (SCB) which was developed in the Fall of 1970 and field-tested with Fifth Cycle Teacher Corps interns.

Developer Comments: None.

User Comments: None.

Modules Within Cluster:

TTP-301.01 (SCB):	Terminology and Format of Behavioral Objectives.
TTP-301.02 (SCB):	Identifying Relevant Educational Goals and Translating them into Behavioral Objectives.
TTP-301.03 (SCB):	Writing Behavioral Learning Packages.

Module Cluster Rationale

It quickly becomes apparent that in education as with most other endeavors little real progress can be made without rather well-defined goals. In education we usually do have some real and relevant goals to work toward; unfortunately, these goals are usually either too fuzzy to be of real assistance to the instructor and the learner, or they are stored mentally in the mind of the instructor with little chance for interchange between instructors or from instructor to student. It is for this reason that we feel it imperative that all educators learn not only to identify relevant goals in education but that they be able to translate those goals into specific behavioral terms.

Module Cluster Objectives

The purpose of this module cluster is to enable the student to identify relevant broad educational goals, to translate those goals into observable pupil behavior, and to write specific behavioral objectives to meet those goals. In order to accomplish the above, the student must display competence in: the terminology of behavioral objectives; the ability to discern between behavioral and non-behavioral objectives; the ability to classify objectives according to the taxonomy; the ability to defend the use of behavioral objectives; the ability to translate educational goals into behavioral objectives; and the ability to write behavioral objectives in all areas of the student's curricular competence in each of the applicable taxonomies.

Module Cluster Prerequisites

There are no specific prerequisites for this cluster. The general prerequisites include an open mind and the ability to write in a clear, precise manner.

TTP-301.01 (SCB): Terminology and Format of Behavioral Objectives
Page 3

Objectives

The student will be able to demonstrate on a paper and pencil test his competence to do the following: (1) define a behavioral objective including the component parts; (2) list the three taxonomic domains and label objectives accordingly; (3) discriminate between behavioral and non-behavioral objectives and change the non-behavioral to behavioral; (4) label a general model of instruction; and (5) defend the position of using behavioral objectives.

Prerequisites

None.

Pre-Assessment

Pre-assessment will consist of a paper-and-pencil test which includes all of the objectives above. Competence will be certified at the ninety percent level.

Learning Alternatives

1. Attend seminars devoted to behavioral objectives.
2. Read:
   a. "A Brief Summary of Behavioral (Instructional) Objectives" by Arends.
   b. *Preparing Instructional Objectives* by Mager.
   c. *Behavioral Objectives and Instruction* by Kibler.
   d. *Stating Behavioral Objectives for Classroom Instruction* by Gronlund.
   e. "Writing Instructional Objectives" in *Phi Delta Kappan* by Esbensen.
   f. *Writing Behavioral Objectives* by McAshan.
   g. *Establishing Instructional Goals* by Popham.
3. View Vimcet Series: #1 Educational Objectives; #2 Systematic Instructional Decision-Making; #3 Selecting Appropriate Educational Objectives; #4 Establishing Performance Standards; and #5 Appropriate Practice.
4. View Pictograph Handbook Series (Center for the Study of Teaching): #1 Competency-Based Teacher Education/What is it? And Why?; #2 Objectives: Their Role in CBTE; #3 A Model of Instruction: The Module; and #4 A Sample Module: Introduction to Interaction Analysis.
5. Interact with instructor on individual basis.
6. Design own instructional activities.

Post-Assessment

Post-assessment will consist of a paper and pencil test which includes all of the objectives above. Competence will be certified at the ninety percent level.

Objective

The student, either alone or in concert with his team, will identify all of the relevant educational goals pertaining to his area of curricular expertise and translate those goals into behavioral objectives.

Prerequisite

Successful completion of TTP-301.01 (SCB).

Pre-Assessment

Pre-assessment will consist of each individual or team submitting their educational goals and the behavioral objectives which meet the goals to the "Evaluation Team" (Instructor-PSC-Team Leaders) for evaluation. Successful completion of this module will be certified when the Evaluation Team is satisfied that sufficient goals and objectives, clearly written, have been presented.

Learning Alternatives

1. Attend seminar devoted to identifying relevant educational goals.
2. Read:
   a. "Identification and Selection of Relevant Goals" by Arends, Masla, and Elmes.
   b. *Behavioral Objectives and Instruction* by Kibler.
   c. *Stating Behavioral Objectives for Classroom Instruction* by Gronlund.
   d. *Establishing Instructional Goals* by Popham.
   e. *Goals Analysis* by Mager.
3. View Vimcet Series: #3 Selecting Appropriate Educational Objectives; #8 A Curriculum Rationale; #9 Defining Content for Objectives; #10 Identifying Affective Objectives; #11 Analyzing Learning Outcomes; #25 Deciding on Defensible Goals via Educational Needs Assessment; and #28 Humanizing Educational Objectives.
4. Engage in individual dialogue with instructor.
5. Student option.

Post-Assessment

Post-assessment will consist of each individual or team submitting their educational goals and the behavioral objectives which meet the goals to the "Evaluation Team" (Instructor-PSC-Team Leaders) for evaluation. Successful completion of this module will be certified when the Evaluation Team is satisfied that sufficient goals and objectives, clearly written, have been presented.

TTP-301.03 (SCB): Writing Behavioral Learning Packages
Page 6

Objective

The student either individually or in concert with his team will write learning packages which incorporate the following: (1) objective, (2) prerequisite, (3) pre-assessment, (4) learning activities, and (5) post-assessment.

Prerequisite

Successful completion of TTP-301.02 (SCB).

Pre-Assessment

Pre-assessment will consist of each individual or team submitting their learning packages to the Evaluation Team. Competency will be certified when the Team has ascertained that sufficient packages of acceptable quality have been submitted.

Learning Alternatives

1. Attend seminar on writing learning packages
2. Read: (1) *The Handbook for the Development of Instructional Modules for Competency-Based Teacher Education Programs* by Arends, Masla, and Weber; or (2) *Behavioral Objectives and Instruction* by Kibler.
3. View Vimcet Series: #5 Appropriate Practice; #7 Evaluation #14 Teaching Units and Lesson Plans; #16 Modern Measurement Methods; #21 Individualizing Instruction; #24 Instructional Tactics for Affective Goals; #27 Opening Classroom Structure; and #29 Writing Tests Which Measure Objectives.
4. View Pictograph Handbook Series: #6 Guidelines for Developing Instructional Modules; and #7 A Reference System for Instructional Modules.
5. Engage in personal or group work with instructor.
6. Student option.

Post-Assessment

Post-assessment will consist of each individual or team submitting their learning packages to the Evaluation Team. Competency will be certified when the Team has ascertained that sufficient packages of acceptable quality have been submitted.

Reference System Designation: SCF-310.00 (SCB).

Program: Seventh Cycle Teacher Corps at the State University College at Buffalo, Buffalo, New York.

Component: Social Cultural Foundations.

Module Cluster: Sociology of the Urban City.

Developers:
Original Cluster developed for Fifth Cycle by: Eunice Benford, Team Leader; Margaret Campoli, Team Leader; Bertram Chalmer, Principal; Sylvia Cohen, LEA Coordinator; Evelyn Cooper, Team Leader; Robert Friday, Intern; Charles Garfinkel, Team Leader; Ernesting Green, Team Leader; John Masla, Director; and Helen Waite, Associate Director.

Revised for Seventh Cycle by: Robert Arends, Program Development Specialist; Eunice Benford, Portal School Coordinator; Ronald Busczkowski, Intern; Mary Glatt, Team Leader; John Hilliard, Portal School Coordinator; John Masla, Director; Verna Morton, Team Leader; Patricia Orrange, Team Leader; David Riley, Team Leader; and Helen Waite, Associate Director.

Date and State of Development: Fall 1972; this module cluster is a revision of SCF-022.00 (SCB) which was developed in the Fall of 1970 and field-tested with Fifth Cycle Teacher Corps interns.

Developer Comments: None.

User Comments: None.

Modules Within Cluster:
SCF-310.01 (SCB): Housing in the Inner City.
SCF-310.02 (SCB): Churches and Church Activities in the Inner City.
SCF-310.03 (SCB): Community Agencies in the Inner City.
SCF-310.04 (SCB): Life Styles in the Inner City.
SCF-310.05 (SCB): Schools in the Inner City.
SCF-310.06 (SCB): Demography of Greater Buffalo.
SCF-310.07 (SCB): Community Service in the Inner City.

Module Cluster Rationale

The rationale for the module cluster is based upon the assumption that students generally have certain preconceived ideas about Buffalo's inner city. This assumption based upon findings obtained from the intern applications for the Teacher Corps Program forms the basis for this cluster. With this in mind, the team leaders have designed this series of modules in order to give interns firsthand information about the community in which they will be working. In completing these modules, interns will also be developing skills which will enable them to formulate plans for long-range community projects.

Module Cluster Objectives

The purpose of this module cluster is to increase the student's (intern's) understanding and skills with regard to his role in the community. The general objectives of this cluster should prepare the student to: (1) identify the characteristics of the community in which he will be working, and (2) be involved in community service projects.

Module Cluster Prerequisites

Only those requirements necessary for entrance into the program stand as prerequisites to this module cluster.

SCF-310.01 (SCB): Housing in the Inner City
Page 3

Objectives

The student (interns) will be able to describe the various types of housing and related facilities within one of the Portal School service areas and to describe the environmental forces which affect the lives of the residents.

Prerequisites

None.

Pre-Assessment

The student (intern will describe in writing (in a closed test situation) the different types of housing within one of the Portal School communities including those environmental forces he perceives affect the lives of the residents. The description must include but not be restricted to the following: (1) percentage of landowners and renters; (2) percentage of single and multiple dwellings; (3) number of public housing projects; (4) type of construction; (5) general state of repair; (6) lot size; (7) general aesthetic characteristics; (8) number and size of public recreation facilities; and (9) type of industry and commercial facilities.

The quality of the description will be assessed by the team leader. The paper will be deposited in the intern's module completion file. Alternate pre-assessment available on a contractual basis with the Associate Director.

Learning Alternatives

1. Attend a seminar with team leaders; seminar is designed to orient the intern to the objective, requirements, and activities of the module.
2. Take a walk around the school community and construct a perception map to aid in recalling feelings and impressions.
3. Visit public housing where available.
4. Make an inventory of the available rent signs, rental advertisements and apartment leasing.
5. Visit the homes of residents.
6. Read the historical description of housing patterns in Buffalo.
7. Read the book *Black Chicago*.
8. Consult with real estate agents on the kinds of facilities available and the range of rental fees.
9. Inquire at a bank about financing and fire insurance.

10. Visit and observe recreational facilities (both public and private).
11. View slide-tape presentation "Wrong Way Go Back" by Fifth Cycle interns Kris Brady, Dan Bily, Pat Guthrie, Don Hill, and Jim Irrigae.
12. Study "Tract Facts" published by Community Welfare Council of Buffalo and Erie County.
13. Student Option.

Post-Assessment

The student (intern) will describe in writing (in a closed test situation) the different types of housing within one of the Portal School communities including those environmental forces he perceives affect the lives of the residents. The description must include but not be restricted to the following: (1) percentage of landowners and renters; (2) percentage of single and multiple dwellings; (3) number of public housing projects; (4) type of construction; (5) general state of repair; (6) lot size; (7) general aesthetic characteristics; (8) number and size of public recreation facilities; and (9) type of industry and commercial facilities.

The quality of the description will be assessed by the team leader. The paper will be deposited in the intern's module completion file. Alternate post-assessment available on a contractual basis with the Associate Director.

SCF-310.02 (SCB): Churches and Church Activities in the Inner City
Page 5

Objectives

The student (intern) will be able to name at least three churches located in one of the Portal School communities and to describe at least three church activities or functions related to the community.

Prerequisites

None.

Pre-Assessment

The student (intern) will describe in writing (in a closed test situation) at least three churches in the Portal School community including at least three church activities or functions related to the community. The team leader will assess the adequacy of that description. The assessment will be placed in the intern's module completion file. Alternate pre-assessment available on a contractual basis with the Associate Director.

Learning Alternatives

1. Attend a seminar with team leader; seminar is designed to orient the intern to the objectives, requirements, and activities of the module.
2. Meet and interview minister, priest, or rabbi.
3. Attend church activity such as bible school, picnic, or church social.
4. Work on a church program.
5. Read a black newspaper and note church items related to the community.
6. Visit a church-sponsored day camp.
7. Get to know a family through attendance at a church activity and visit family in their home.
8. Design own experiences.
9. View "Wrong Way Go Back."

Post-Assessment

The student (intern) will describe in writing (in a closed test situation) at least three churches in the Portal School community including at least three church activities or functions related to the community. The team leader will assess the adequacy of that description. The assessment will be placed in the intern's module completion file. Alternate post-assessment available on a contractual basis with the Associate Director.

SCF-310.03 (SCB): Community Agencies in the Inner City
Page 6

Objectives

The student will be able to describe the services offered by the various community agencies active in one of the Portal School communities.

Prerequisites

None.

Pre-Assessment

The intern will describe in writing the services offered by each of the various major community agencies in one Portal School community; the adequacy of this description will be assessed by his team leader. The assessment will be placed in the intern's module completion file. Alternate pre-assessment available on a contractual basis with the Associate Director.

Learning Alternatives

The following activities are available to students striving to acquire the objectives.

1. Attend a seminar with team leader; seminar is designed to orient intern to the objectives, requirements, and activities of the module.
2. Visit at least three of the following agencies and report in writing on how they serve a specific community need; carefully note the agencies attitude toward the community which it serves: (a) Salvation Army, (b) Urban League, (c) Legal Aid Society, (d) Erie County Department of Social Welfare, (e)Community Action Organization, (f) Neighborhood Youth Corps, (g) Wettlaufer Clinic, (h) Children's Aid Society, (i) Urban Renewal, (j) Department of Human Relations, (k) Family Service Society, (l) Housing Opportunities Made Equal (HOME), (m) Monsignor Carr Institute, Inc., (n) Langston Hughes Art Center, (o) Elmwood Franklin School of Music, and (p) St. Augustine Center
3. Talk with people in the community in order to find out how much use is made of each of the agencies.
4. Study the functions and services of all the agencies and determine whether there is an overlapping of services and, if so, be able to describe them.
5. Obtain pamphlets available from the agencies and determine the kinds of services available and how the agency was originated and/or developed.
6. Design own experiences.

Post-Assessment

The intern will describe in writing the services offered by each of the various major community agencies in one Portal School community; the adequacy of this description will be assessed by his team leader. The assessment will be placed in the intern's module completion file. Alternate post-assessment available on a contractual basis with the Associate Director.

SCF-310.04 (SCB): Life Styles in the Inner City
Page 8

Objectives

The student (intern) will identify the various life styles of the people in the community.

Prerequisites

None.

Pre-Assessment

The intern will describe in writing (in a closed test situation) the various life styles of the people in one of the Portal School communities. The description must include but not be restricted to the following: (1) percent of residents on Welfare or ADC, (2) percent of residents gainfully employed, (3) median educational level of residents, and (4) most prevalent social and recreational activities.

The quality of the description will be assessed by the team leader. The assessment will be deposited in the intern's module completion file. Alternate pre-assessment available on a contractual basis with the Associate Director.

Learning Alternatives

1. Attend a seminar with team leaders; seminar is designed to orient the student to the objectives, requirements, and activities of the module.
2. Visits to the following are encouraged in order to make an informal survey of the various life styles which exist in the community: (a) picnic, (b) Tennis Clinic, (c) playgrounds, (d) concerts, (e) laundromat, (f) car wash, (g) restaurants, (h) Skateland, (i) Y.M.C.A., (j) Afro-Cultural Center, (k) Studio Arena, (l) P.A.L., (m) area stores, (n) black club meeting, and (o) Neighborhood House.
3. Talk to black businessmen.
4. Read black newspapers
5. View "Wrong Way Go Back" by Fifth Cycle interns.
6. Study "Tract Facts" published by Community Welfare Council of Buffalo and Erie County.
7. Design own activity.

Post-Assessment

The intern will describe in writing (in a closed test situation) the various life styles of the people in one of the Portal School communities. The description must include but not be restricted to

the following (1) percent of residents on Welfare or ADC, (2) percent of residents gainfully employed, (3) median educational level of residents, and (4) most prevalent social and recreational activities.

The quality of the description will be assessed by the team leader. The assessment will be deposited in the intern's module completion file. Alternate post-assessment available on a contractual basis with the Associate Director.

SCF-310.05 (SCB): Schools in the Inner City
Page 10

Objective

The student (intern) will demonstrate his involvement and understanding of the school as a community with its formal and informal structures and its operations. Competence will be displayed through a series of written reports reflecting the objective.

Prerequisites

None.

Pre-Assessment

Pre-assessment will consist of a series of written reports. The reports are as follows:

1. Give a written description of the physical plant of the school.
2. Select four of the interviews with school personnel and describe how the interviewee perceives his role in the school.
3. Select one of the interviews relating to community representatives and list the strengths and needs of the school as the interviewed person perceives them.
4. Select one student and describe your reaction to the interview with him.
5. Summarize the issues that are discussed at two of the community association meetings that you have attended.
6. Describe the informal power structure of the school.

Each of the written reports will be evaluated by the team leader. Assessments will be deposited in the intern's module completion file.

Learning Alternatives

1. Attend a lecture conducted by the team leader or portal school coordinator on the formal and informal organization of the school.
2. Interview the principal, assistant principal, guidance counselor, resource reading teacher, school nurse, librarian, attendance teacher, school social worker and clerk.
3. Interview an official of the community organization of the school, community leaders and parents.
4. Interview a minimum of five students and record their perceptions of what the school means to them.
5. Attend community association meetings of the Portal School.
6. Collect and read written literature available on the schools.

7. Become familiar with curriculum guides and teacher's editions of the grade level or in the subject area in which you are teaching.
8. During meetings, and in the lounge make notes of the informal power structure of the building.
9. Student option.

Post-Assessment

Post-assessment will consist of a series of written reports. The reports are as follows:

1. Give a written description of the physical plant of the school.
2. Select four of the interviews with school personnel and describe how the interviewee perceives his role in the school.
3. Select one of the interviews relating to community representatives and list the strengths and needs of the school as the interviewed person perceives them.
4. Select one student and describe your reaction to the interview with him.
5. Summarize the issues that are discussed at two of the community association meetings that you have attended.
6. Describe the informal power structure of the school.

Each of the written reports will be evaluated by the team leader. Assessments will be deposited in the intern's module completion file.

SCF-310.06 (SCB): Demography of Greater Buffalo
Page 12

Objective

After gathering demographic data through local documents, interviews with long-time residents, and by numerous field trips, each intern will be able to locate a number of specific points of interest, and special localities on a map of greater Buffalo.

Prerequisites

None.

Pre-Assessment

The student (intern) will (in a closed test situation) locate the following on a map of greater Buffalo with ninety percent accuracy.

1. Locate five cultural institutions and name them.
2. Locate the following areas of ethnic and racial concentration: (a) Polish, (b) Italian, (c) Black, (d) German, (e) Puerto Rican, and (f) Irish.
3. Locate two changing neighborhoods and indicate changing from what to what.
4. Locate the following suburban areas: (a) Williamsville, (b) Amherst, (c) Cheektowaga, (d) Orchard Park, (e) Lackawanna, (f) Tonawanda, and (g) Kenmore.
5. Locate three public housing projects and name them.
6. Locate and name three hospitals.
7. Locate and name four institutions of higher education.
8. Locate three public recreation facilities not in the Portal Schools area.

Learning Alternatives

1. Attend seminar with Associate Director and team leaders--
2. Read "Tract Facts" published by the Community Welfare Council of Buffalo and Erie County.
3. Study maps of greater Buffalo.
4. Confer with Model Cities Project Developers.
5. Interview long-time residents of Buffalo.
6. Tour greater Buffalo.
7. Student option.

Post-Assessment

The student (intern) will (in a closed test situation) locate the following on a map of greater Buffalo with ninety percent accuracy.

1. Locate five cultural institutions and name them.
2. Locate the following areas of ethnic and racial concentration: (a) Polish, (b) Italian, (c) Black, (d) German, (e) Puerto Rican, and (f) Irish.
3. Locate two changing neighborhoods and indicate changing from what to what.
4. Locate the following suburban areas: (a) Williamsville, (b) Amherst, (c) Cheektowaga, (d) Orchard Park, (e) Lackawanna, (f) Tonawanda, and (g) Kenmore.
5. Locate three public housing projects and name them.
6. Locate and name three hospitals.
7. Locate and name four institutions of higher education.
8. Locate three public recreation facilities not in the Portal Schools area.

SCF-310.07 (SCB): Community Service in the Inner City.
Page 14

Objective

The student (intern) will become involved in providing long-term service for the school community.

Prerequisites

None

Pre-Assessment

Because of the nature of the objective, the intern may not "test out" of this module. Thus, there is no pre-assessment.

Learning Alternatives

In his long-term service in the school community (over a period of two years), the intern may experience any or all of the following:

1. Volunteer services for a community center.
2. Join the school community group.
3. Organize a new service for the community.
4. Confer with community leaders.
5. Write a tentative proposal for a community group.
6. Attend school community affirs regularly.
7. Search out sources for funds.
8. Determine which community organizations have succeeded and the reasons for their success.
9. Design his own form of involvement.

Post-Assessment

Throughout the two-year period, the team leader will regularly evaluate the intern's participation in and commitment to community service and will provide the intern with feedback in this regard.

Remediation

In this case, remediation procedures would include: (1) the intern moving from an unsatisfactory situation to one more satisfactory, (2) encouragement by the team leader, and (3) such measures deemed necessary and appropriate to motivate the student to be effective and regular in his commitment and responsibilities. Failure to satisfactorily complete community work may result in deselection from the program.

Reference System Designation: GEN-004.00 (HOU)

Program: The Sixth Cycle Teacher Corps Program of the University of Houston and Houston Independent School District, Houston, Texas; the program is a two-year graduate internship for persons holding baccalaureate degrees in fields other than education; the program leads to a Master of Education degree and provisional certification; the program is focused on elementary school education, urban education, and the education of Black and Chicano children.

Component: Generic Teaching Competencies.

Module: Individualized Instruction.

Developer: Wilford A. Weber, Education Building 342, College of Education, University of Houston, Houston, Texas 77004; 713-749-3580.

Date and State of Development: Summer 1972; the module will be used for the first time during the fall of 1972.

Developer Comments: None.

User Comments: None.

Rationale

Traditionally, instruction has been class oriented. That is, all members of a given class worked to achieve the same objectives, experienced the same instruction, used the same materials, were evaluated in the same way, and were given the same time in which to complete assignments. In short, instructional experiences have been largely group oriented, teacher dependent, and teacher paced. Recently it has been recognized that pupils learn different things differently. This has led a variety of approaches to individualizing instruction.

In simple terms, there are four major types of individualized instruction: (1) individually diagnosed and prescribed instruction, (2) self-directed instruction, (3) personalized instruction, and (4) independent study. The purpose of this module is to help the intern become competent in designing, implementing, and evaluating these approaches to individualizing instruction.

Objectives

1. The intern will describe the operational elements which characterize and distinguish: (a) individually diagnosed and prescribed instruction, (b) self-directed instruction, (c) personalized instruction, and (d) independent study.
2. The intern will develop a list of criteria for determining the effectiveness of various approaches to individualizing instruction.
3. The intern will design, implement, and evaluate individually diagnosed and prescribed instruction.
4. The intern will design, implement, and evaluate self-directed instruction.
5. The intern will design, implement, and evaluate personalized instruction.
6. The intern will design, implement, and evaluate independent study.

Prerequisites

While not required, it is recommended that interns complete GEN-001.00 (HOU) before attempting this module.

Pre-Assessment

The pre-assessment procedure consists of two parts: (1) a pencil-and-paper test in which the intern describes the operational elements which characterize and distinguish: (a) individually diagnosed and prescribed instruction, (b) self-directed instruction, (c) personalized instruction, and (d) independent study, and presents a checklist of criteria for assessing the effectiveness of various approaches to individualized instruction; and (2) a series of instructional episodes in which the intern will design, implement, and evaluate: (a) individually

diagnosed and prescribed instruction, (b) self-directed instruction, (c) personalized instruction, and (d) independent study for at least six pupils in at least two different content areas. Part I will be administered and scored by the instructor. Part II will be evaluated by the team leader and/or the Assist and Assess Team using the checklist developed in Part I.

Learning Alternatives

The following learning alternatives are provided to assist the intern in acquiring the competencies specified in this module:

1. Read any part or all of *Individualizing Instruction*, Part I of the Sixty-First Yearbook of the National Society for the Study of Education edited by Nelson B. Henry. Chicago: University of Chicago Press, 1962.
2. Read *Developing Individualized Instructional Material* by Stuart R. Johnson and Rita B. Johnson. Palo Alto, California: Westinghouse Learning Press, 1970.
3. View any or all of the following slide-tapes distributed by the Association for Educational Communications and Technology, Washington, D.C., 1970; these materials are available in the Teacher Corps Resource Center, Education Building 450.
   a. Filmstrip 1. "Individualized Instruction: Its Nature and Effects."
   b. Filmstrip 2. "Individualized Instruction: Its Objectives and Evaluation Procedures."
   c. Filmstrip 3. "Individualized Instruction: Diagnostic and Instructional Procedures."
   d. Filmstrip 4. "Individualized Instruction: Materials and Their Use."
   e. Filmstrip 5. "Individualized Instruction: Its Problems and Some Solutions."
   f. Filmstrip 6. "Individualized Instruction: Recommendations for Implementation."
4. Read any of the 46 "Individualized Instruction Case Studies" distributed by the Association for Educational Communications and Technology, Washington, D.C., 1970. The case studies, described in brief pamphlet form, are located in the Teacher Corps Resource Center.
5. In a group of five or more interns, work through all or part of *Minicourse Eight. Organizing Independent Learning: Primary Level*. Beverly Hills, California: Macmillan Educational Services, Inc., 1971. The minicourse materials are located in the Teacher

Corps Resource Center. The materials consist of: (1) five 16mm films--an introductory film and four "instructional and model lesson" films, and (2) a Teachers Handbook containing microteach and lesson plan suggestions, self-evaluation forms, and follow-up lesson suggestions; there is a copy of the Handbook available for each intern. A Coordinators Handbook is available for team leaders.

6. Observe a teacher noted for his ability to individualize instruction; discuss your observations with him.
7. Practice individualizing instruction under the guidance of your team leader; use the team leader's feedback to revise your instruction.
8. Consult with the instructor concerning additional experiences which might be made available to you.
9. Read any of the articles or books you find in *Differentiated Staffing, Non-Graded, Continuous Progress, Open Concept Schools: A Comprehensive Bibliography* which you feel would be helpful. The book was published by the College's Bureau of Education Research and Services in 1972; copies are available in the Teacher Corps Resource Room, Education Building 450. You will find the references from the "Open Concept Schools" section to be especially helpful; especially: Jack V. Edling, "Individualizing Instruction: The Way It Is--1970," *Audio-Visual Instruction*, February, 1970, pages 13-16.
10. Design your own experience.

Post-Assessment

The post-assessment procedure consists of two parts: (1) a pencil-and-paper test in which the intern describes the operational elements which characterize and distinguish: (a) individually diagnosed and prescribed instruction, (b) self-directed instruction, (c) personalized instruction, and (d) independent study, and presents a checklist of criteria for assessing the effectiveness of various approaches to individualized instruction, and (2) a series of instructional episodes in which the intern will design, implement, and evaluate: (a) individually diagnosed and prescribed instruction, (b) self-directed instruction, (c) personalized instruction, and (d) independent study for at least six pupils in at least two different content areas. Part I will be administered and scored by the instructor. Part II will be evaluated by the team leader and/or the Assist and Assess Team using the checklist developed in Part I.

Remediation

Should it be necessary, the intern, his team leader, and the instructor would work together to design experiences which would help the intern achieve the objectives of this module.

Reference System Designation: GEN-007.00 (HOU)

Program: The Sixth Cycle Teacher Corps Program of the University of Houston and Houston Independent School District, Houston, Texas; the program is a two-year graduate internship for persons holding baccalaureate degrees in fields other than education; the program leads to a Master of Education degree and provisional certification; the program is focused on elementary school education, urban education, and the education of Black and Chicano children.

Component: Generic Teaching Competencies.

Module: Differentiated Staffing.

Developer: Wilford A. Weber, Education Building 342, College of Education, University of Houston, Houston, Texas 77004; 713-749-3580.

Date and State of Development: Summer 1972; the module will be used for the first time during the fall of 1972.

Developer Comments: Additional learning alternatives are under development.

User Comments: None.

Rationale

There was a time when a teacher was expected to be "all things to all pupils." That is, the teacher played all of the roles which fell to the title "Teacher." Among other things, he planned and conducted instruction, ordered supplies and materials, designed and taught the whole curriculum, evaluated pupil progress, and was the only instructor his pupils had during a school year--and maybe every year. He also very often built the fire in the morning, swept the floors, and painted the classroom. Over time, the role of the teacher has changed; certain responsibilities have disappeared while others have been added. Many educators argue that it is not now possible for the teacher to play all of these roles well; indeed, there may be roles he is not at all competent to play. Thus, it may take several people--each with a different set of responsibilities and functions--to insure that all teaching roles are effectively played. The patterns of organization in which teaching personnel have differing responsibilities are called differentiated staffing patterns. The purpose of this module is to help the intern become an effective part of a differentiated staff.

Objectives

1. The intern will describe at least three patterns of differentiated staffing, their purposes, their benefits, and their operational procedures.
2. The intern will describe the types of responsibilities each staff member has in at least three patterns of differentiated staffing.
3. The intern will describe and defend a differentiated staffing pattern he feels would be ideal for his school, its staff, and its pupils and will describe the role he would play in that pattern.
4. The intern will--depending upon the nature of his school setting: (a) participate as a member of a differentiated staff for at least one week, keep a detailed log describing his responsibilities during that period, and evaluate his performance; or (b) observe a member of a differentiated staff for at least one full school day, keep a detailed log describing that person's responsibilities during that period, and evaluate that person's performance.

Prerequisites

There are no prerequisites to this module, but it is suggested that it might be taken at about the same time as GEN-006.00 (HOU) and GEN-008.00 (HOU).

Pre-Assessment

The pre-assessment procedure consists of two parts: (1) a series of brief papers--or a single paper in which the intern: (a) describes

at least three patterns of differentiated staffing, their purposes, their benefits, and their operational procedures, (b) describes the types of responsibilities each staff member has in at least three patterns of differentiated staffing, and (c) describes and defends a differentiated staffing pattern he feels would be ideal for his school, its staff, and its pupils and describes the role he would play in that pattern; and (2) depending upon the possibilities available, the intern either: (a) participates as a member of a differentiated staff for at least one week, keeps a detailed log describing his responsibilities during that period, and evaluates his performance, or (b) observes a member of a differentiated staff for at least one full school day, keeps a detailed log describing that person's responsibilities during that period, and evaluates that person's performance. The adequacy of the Part I report will be judged by the instructor. With regard to Part II, the team leader will determine whether the intern shall do Option A (participation) or Option B (observation); the team leader will judge the adequacy of the intern's performance in this regard.

Learning Alternatives

The following instructional experiences are intended to assist the intern in achieving the objectives of the module.

1. Read *Differentiated Staffing* by James Cooper. Philadelphia: W. B. Saunders Company, 1972. 147 pages.
2. Read *Differentiated Staffing: The Mesa Approach*. Mesa, Arizona: The Arizona-Mesa Differentiated Staffing Consortium, 1971. 26 pages. In addition, you may want to read one or more of the reference works listed in the pamphlets bibliography.
3. Read any of the references listed in *Differentiated Staffing, Non-Graded, Continuous Progress, Open Concept Schools: A Comprehensive Bibliography* published by the Bureau of Education Research and Services of the College of Education, University of Houston, 1972. Copies are located in the Teacher Corps Resource Center. In this regard, note particularly works by Dwight W. Allen and Fenwick W. English.
4. View slide-tape presentation "Differentiated Staffing," produced by the School Personnel Utilization Leadership Training Institute, Amherst, Massachusetts (Undated publication). A copy is located in the Teacher Corps Resource Center.
5. Read *Strategies for Differentiated Staffing* by Fenwick W. English and Donald K. Sharpes, Berkeley, California: McCutchan Publishing Corporation, 1972. This is an excellent book written by authors with first-hand experience with differentiated staffing.
6. Observe a differentiated staff in action; try to determine the roles played by various personnel; check your perceptions with that staff as you later talk with them about their individual and collective responsibilities.

7. Participate as a member of a differentiated staff if your school situation will allow it. After several days, analyze your role with the help of your team leader. If you are not able to participate because of the organizational pattern in your school, write a description of the roles and responsibilities you might have as a member of a differentiated staff. Discuss your perceptions with those of your team leader.
8. Design your own experiences.

Post-Assessment

The post-assessment procedure consists of two parts: (1) a series of brief papers--or a single paper in which the intern: (a) describes at least three patterns of differentiated staffing, their purposes, their benefits, and their operational procedures, (b) describes the types of responsibilities each staff member has in at least three patterns of differentiated staffing, and (c) describes and defends a differentiated staffing pattern he feels would be ideal for his school, its staff, and its pupils and describes the role he would play in that pattern; and (2) depending upon the possibilities available, the intern either: (a) participates as a member of a differentiated staff for at least one week, keeps a detailed log describing his responsibilities during that period, and evaluates his performance, or (b) observes a member of a differentiated staff for at least one full school day, keeps a detailed log describing that person's responsibilities during that period, and evaluates that person's performance. The adequacy of the Part I report will be judged by the instructor. With regard to Part II, the team leader will determine whether the intern shall do Option A (participation) or Option B (observation); the team leader will judge the adequacy of the intern's performance in this regard.

Remediation

Should it be necessary, the intern, his team leader and the instructor should design any additional instruction which might be deemed appropriate in helping the intern meet the objectives of the module.